

Morbidity and Mortality



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ATLANTA, GA. 30333

EPIDEMIOLOGIC NOTES AND REPORTS TRANSFUSION-INDUCED MALARIA - Maryland

On July 24, 1970, a 28-year-old man was transferred to a hospital in Baltimore, Maryland, for treatment of hypertension resulting from chronic renal disease. He began peritoneal dialysis on July 25 and on that day was given two units of whole blood. Subsequently hemodialysis was initiated, and he received two additional transfusions, one each on August 5 and August 8.

On August 5 he began to have spiking temperature elevations to 104°F. and chills. A massive pericardial effusion was tapped on August 13, from which an *Escherichia* species was cultured. On August 17 another pericardiotomy was performed and parasitic ring forms were detected in 5 percent of the red blood cells of the effusion; they were tentatively identified as *Plasmodium falciparum*.

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On review of previous peripheral smears, parasites were found on smears obtained as early as August 11. Treatment was begun with oral quinine and pyrimethamine.

The patient denied recent travel to a malarious area, history of malaria or unexplained febrile illness, and the
(Continued on page 334)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	34th WEEK ENDED		MEDIAN 1965 - 1969	CUMULATIVE, FIRST 34 WEEKS		
	August 29, 1970	August 23, 1969		1970	1969	MEDIAN 1965 - 1969
Aseptic meningitis	302	141	141	2,489	1,559	1,510
Brucellosis	3	3	7	133	145	156
Diphtheria	28	6	2	244	101	101
Encephalitis, primary:						
Arthropod-borne & unspecified	35	26	48	849	693	974
Encephalitis, post-infectious	6	10	10	305	231	521
Hepatitis, serum	167	109	783	4,730	3,445	26,348
Hepatitis, infectious	1,173	880		36,487	30,326	
Malaria	62	66	33	2,239	1,801	1,276
Measles (rubeola)	186	146	175	39,235	20,001	57,254
Meningococcal infections, total	37	30	31	1,808	2,300	2,248
Civilian	36	29	31	1,624	2,097	2,068
Military	1	1	1	184	203	180
Mumps	620	504	---	74,476	66,989	---
Poliomyelitis, total	---	1	---	18	11	37
Paralytic	---	1	---	18	11	33
Rubella (German measles)	201	322	---	48,786	48,364	---
Tetanus	2	---	3	75	94	110
Tularemia	3	2	5	94	92	118
Typhoid fever	11	5	7	183	182	236
Typhus, tick-borne (Rky. Mt. spotted fever)	12	15	13	273	339	209
Rabies in animals	53	53	74	2,047	2,367	2,846

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Psittacosis: Calif.-1	22
Botulism:	9	Rabies in Man:	2
Leprosy: Calif.-4, La.-1, Mich.-1	86	Rubella congenital syndrome: Calif.-1	44
Leptospirosis: Calif.-1, Tex.-2	29	Trichinosis:	65
Plague: N. Mex.-1	9	Typhus, murine:	30

MALARIA — (Continued from front page)

use of commonly-shared syringes. The donors of the four units of blood he received were identified. Three previously donated blood to a blood collection service in North Carolina. Each of the three denied foreign travel and two had donated blood previously without incident, therefore they were considered unlikely as the source of infection. The fourth unit was donated on July 22 at a collection center in Columbia, South Carolina, by a 21-year-old serviceman and was given to the patient on July 25. This donor denied travel to a malarious area when the blood was collected, but a check of his Army records revealed that he had returned from Vietnam on Oct. 16, 1969. Upon repeat questioning, he denied having malaria or any febrile illness while in Vietnam or after his return, and he stated that he took all of his antimalarial prophylactic drugs as required. A peripheral blood smear obtained on August 18 demonstrated rare parasites of *P. falciparum*. The end-point dilutions of his serum when tested with the indirect fluorescent

antibody (IFA) test for malaria were *P. falciparum* 1:256, *P. vivax* 1:64, and *P. malariae* 1:64. Peripheral blood smears and sera for IFA testing are being obtained from the remaining three donors.

(Reported by Patricia McIntyre, M.D., Attending Physician, Duane Smith, M.D., Fellow in Infectious Diseases, Alfred Grindon, M.D., Director, Blood Bank, Johns Hopkins Hospital School of Medicine; and Howard Garber, M.D., State Epidemiologist, Maryland.)

Editorial Note:

This is the fifth case of transfusion-induced malaria reported to the Malaria Surveillance Unit, CDC, in 1970. Twenty-one cases have been reported since 1966 when large numbers of troops began to return from Vietnam, and the infective donor in at least 10 cases was shown to be a Vietnam returnee.

ZINC POISONING FROM LEMONADE — Bellevue, Washington

On July 14, 1970, in Bellevue, Washington, two of five members of a Washington State highway survey team developed symptoms subsequently identified as resulting from ingestion of lemonade contaminated with zinc. They drank lemonade from a portable, 2-gal., galvanized water cooler. Investigation was begun by the health department when a private physician reported giving medical attention to one of the two ill men.

Lemonade was prepared in the galvanized cooler at 5:30 a.m. on July 14. Five packages of powdered lemonade and three cups of sugar were mixed in 2 gallons of water. The lemonade drink was consumed the same day between 10 a.m. and 4 p.m. by the five crew members. Three of the crew members drank only one to three cups of lemonade because it tasted peculiar. They ate their lunch and had no apparent symptoms. The two men who became ill in the afternoon, one 33 years old and the other 27 years old, ate no lunch but drank most of the lemonade. Both men stated that their saliva seemed to thicken in their mouth as they drank each cup. As a result, they became thirstier and drank more lemonade.

The 33-year-old man became ill at 3 p.m. while at work, with lightheadedness, nausea, and abdominal pain followed by diarrhea. He suspected poisoning from the lemonade when he removed the plastic-lined lid and noticed that the interior of the cooler was galvanized and showed extensive corrosion. He drove immediately to his physician who induced vomiting. The following morning, he returned

to work feeling weak and complaining of an upset stomach. The 27-year-old man became ill at 4 p.m. on his way home, experiencing severe abdominal pain and diarrhea. The following day, he stayed home from work, convinced that he had suddenly developed ulcers. Both men recovered within a few days.

A 1-oz. sample of lemonade, remaining in the cooler, was analyzed by x-ray spectrometry. Concentration of zinc in the liquid sample was found to be approximately 2.2 parts per thousand by weight (mg/ml).

The 2-gal. cooler is made by a company in Houston, Texas, that produces both a galvanized and a plastic-lined can. This type of water cooler is in common use by men who work out-of-doors for carrying drinking water. The company was notified of this episode. It was suggested that a precautionary note be enclosed in their galvanized water cooler to reserve its use for water alone.

Appropriate action was immediately initiated by local and state authorities to prevent a recurrence of zinc poisoning from misuse of galvanized water coolers among workers in Washington.

(Reported by Richard Rowley Sefi, M.D., Private Physician, Seattle; Herb W. Anderson, Environmental Epidemiologist, Fred Aldridge, Director of Sanitation, and Donald R. Peterson, M.D., Director of Epidemiology, Seattle-King County Department of Public Health; and Byron J. Francis, M.D., Supervisor, Epidemiology Section, Division of Health, Washington State Department of Social and Health Services.)

SURVEILLANCE SUMMARY

RUBELLA - United States

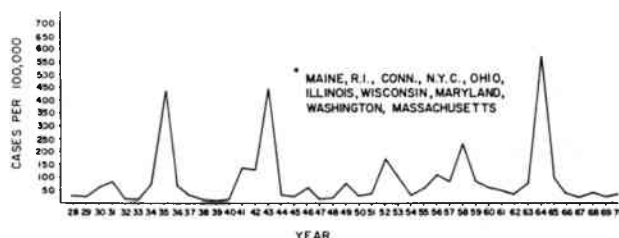
In January 1966, rubella was officially added to the list of notifiable diseases by the Conference of State and Territorial Epidemiologists. Before this, some states maintained rubella surveillance and optionally reported cases to the Center for Disease Control. The data since 1966 have been submitted to the CDC in the Weekly Telegraphic Report of Notifiable Diseases.

There exists, at present, considerable variability in the completeness of rubella reporting, as well as in the type and accuracy of the information reported. The variability and the potential bias due to use of data collected from selected areas demand that surveillance data be interpreted with some caution.

Rubella incidence since 1928 in 10 selected areas is presented in Figure 1. Although the incidence varies considerably, these data suggest that major epidemics occurred throughout the United States in 1935, 1943, and 1964. Further, high incidence was reported in 1952 and 1958. These periods of increased rubella activity occurred at 6- to 9-year intervals.

Reported cases of rubella for the 10 years 1960-1969 were also inconsistent and sporadic (Table 1). The reported cases by month of onset since January 1963 for 24 selected states (Figure 2) shows the seasonal variation in disease

Figure 1
RUBELLA INCIDENCE - TEN SELECTED AREAS*
UNITED STATES - 1928-1970



incidence. The number of reported cases in epidemic and nonepidemic years increased in early winter, peaked in the spring, and declined to a low point in late summer and autumn. The uniformity of the seasonal pattern of rubella in the different regions of the United States is shown in Figure 3. The pattern seen in the individual regions is similar to that noted nationally. Except in the West South Central region, no major increase in rubella activity has occurred during the current epidemiologic year compared with the past two epidemiologic years. Increased reported cases from Texas account in large measure for the high

(Continued on page 337)

Figure 2
REPORTED RUBELLA CASES BY MONTH OF ONSET
24 SELECTED STATES - JANUARY 1963-AUGUST 1970

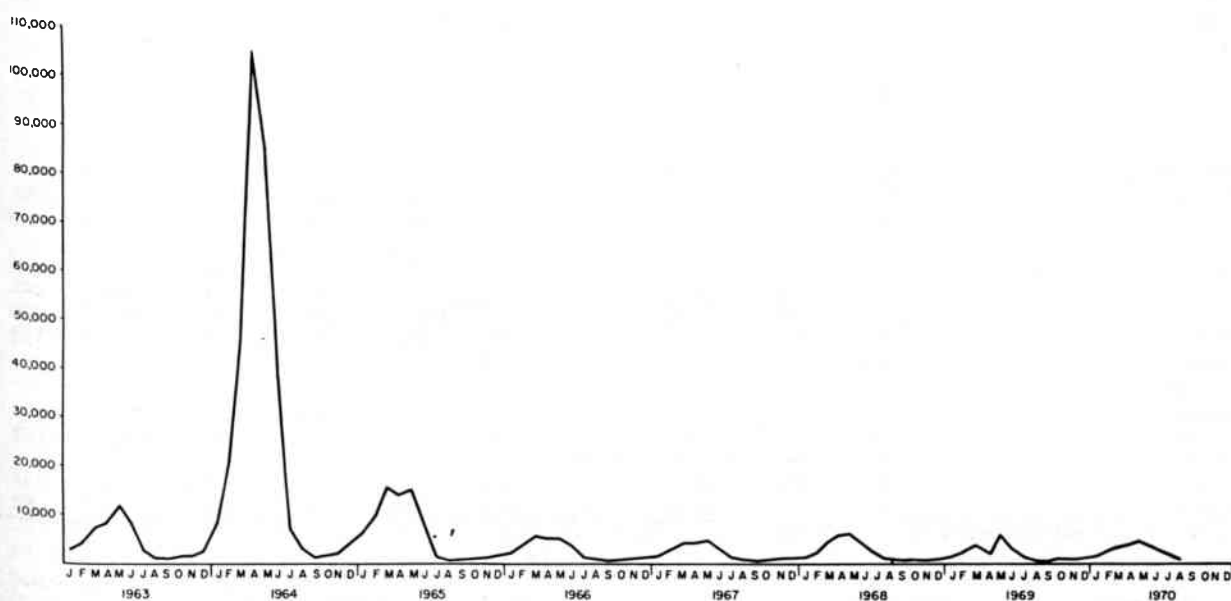


Table 1
Reported Cases of Rubella by State - 1960-1969

AREA	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960
UNITED STATES	55,549	48,446	46,888	46,975	100,842	448,796	60,431†	37,265	43,810	50,958
No. States Reporting		(47)	(47)	(44)	(36)	(35)	(32)	(32)	(33)	(31)
NEW ENGLAND	4,130									
Maine	417	629	856	421	953	7,463	953	514	1,436	1,451
New Hampshire	109	92	214	133	163	1,331	453	57	217	163
Vermont	121	91	227	130	—	—	—	—	—	—
Massachusetts	1,463	3,608	1,429	2,056	2,839	37,105	11,739	3,766	6,443	5,562
Rhode Island	289	1,397	384	283	234	11,399	1,324	129	313	138
Connecticut	1,731	3,039	1,910	2,245	1,719	40,737	3,945	1,338	2,748	3,750
MIDDLE ATLANTIC	3,505									
New York	1,996	4,389	2,258	2,631	2,505	61,624	8,158	4,246	4,465	8,816
New Jersey	627	1,680	NN	—	—	—	—	—	—	—
Pennsylvania	882	208	179	114	—	—	—	—	—	—
EAST NORTH CENTRAL	12,898									
Ohio	1,320	2,099	771	1,254	2,348	19,194	2,953	979	1,607	3,621
Indiana	2,385	912	669	2,345	1,911	13,037	1,972	1,406	1,371	1,937
Illinois	1,786	3,355	1,621	2,935	4,850	29,685	2,108	2,030	3,438	1,723
Michigan	4,127	1,908	2,338	3,040	9,937	18,922	1,637	1,091	1,224	2,028
Wisconsin	3,280	2,980	3,340	5,446	9,570	96,583	4,731	4,365	5,418	4,841
WEST NORTH CENTRAL	4,088									
Minnesota	245	69	97	124	1,910	3,232	—	—	1	—
Iowa	2,541	2,053	1,896	1,952	3,798	18,481	1,727	416	482	438
Missouri	580	142	350	61	39	573	155	158	—	—
North Dakota	256	238	181	205	—	—	—	—	—	—
South Dakota	—	—	3	2	—	—	—	—	—	—
Nebraska	352	32	153	—	13	—	—	—	—	—
Kansas	114	128	16	NN	—	—	—	—	—	—
SOUTH ATLANTIC	7,645									
Delaware	211	150	84	55	111	802	135	144	276	38
Maryland	865	366	615	404	248	3,583	299	258	391	211
District of Columbia	166	14	9	15	16	455	149	17	50	44
Virginia	1,598	644	675	961	—	—	—	—	—	—
West Virginia	2,417	904	639	1,037	2,091	6,774	1,438	960	748	314
North Carolina	19	—	NN	—	—	—	—	—	—	—
South Carolina	301	259	231	284	—	†††	—	—	—	—
Georgia	—	—	784	493	285	497	85	315	34	140
Florida	2,068	1,491	1,174	1,447	892	8,661	1,008	501	732	834
EAST SOUTH CENTRAL	3,156									
Kentucky	1,187	861	2,141	1,960	1,190	18,027	2,158	914	2,034	1,696
Tennessee	1,635	1,135	1,367	2,578	—	—	—	—	—	—
Alabama	136	464	191	122	169	3,574	88	57	60	45
Mississippi	198	9	—	—	1,167	6,784	—	—	2	—
WEST SOUTH CENTRAL	6,504									
Arkansas	199	4	114	14	428	1,025	370	59	168	218
Louisiana	39	62	NN	—	—	—	—	—	—	—
Oklahoma	1,852	93	558	NN	—	—	—	—	—	—
Texas	4,414	2,923	640	140	—	—	—	—	—	—
MOUNTAIN	3,064									
Montana	108	96	200	376	2,526	2,367	898	1,011	747	783
Idaho	94	130	72	119	1,088	462	82	116	87	52
Wyoming	103	14	5	239	—	25	—	—	—	—
Colorado	1,423	892	1,885	785	1,973	11,817	1,219	1,729	1,803	1,549
New Mexico	312	134	309	113	272	351	109	26	41	142
Arizona	861	700	1,168	2,619	2,076	6,653	1,608	1,732	1,751	1,493
Utah	158	110	71	80	1,489	588	85	111	110	143
Nevada	5	—	425	30	22	—	—	—	—	—
PACIFIC	10,559									
Washington	1,943	1,851	3,377	3,435	25,258	11,119	5,526	5,152	3,176	4,230
Oregon	743	625	986	1,174	12,956	4,190	2,114	3,318	2,298	4,167
California	6,174	4,890	9,539	2,847*	—	—	—	—	—	—
Alaska	543	289	381	112	451	747	1,127	152	89	331
Hawaii	1,156	287	356	159	3,345	929	78	198	50	60

NN — Report not required by State Health Dept.

— No cases reported.

† Includes data for Maine from State Report.

†† Hawaii not included in U.S. total.

* Vol. reports prior to 11/66.

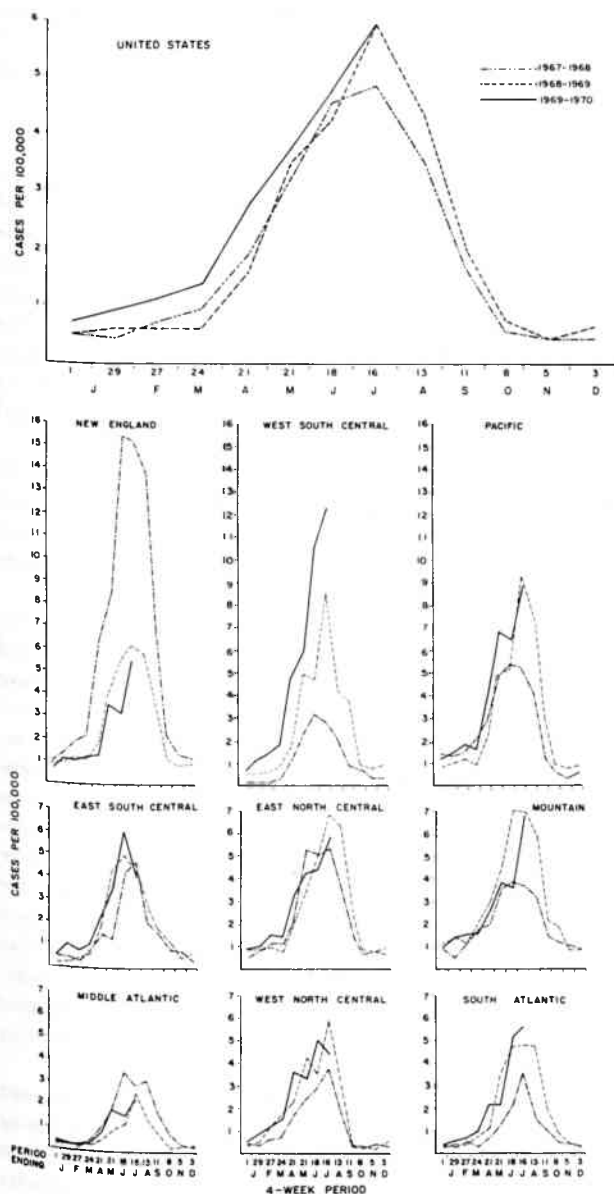
... Data not available

††† Included in measles.

Source: Reported Incidence of Notifiable Diseases in the United States; Annual Supplement for respective year.

RUBELLA - (Continued from page 335)

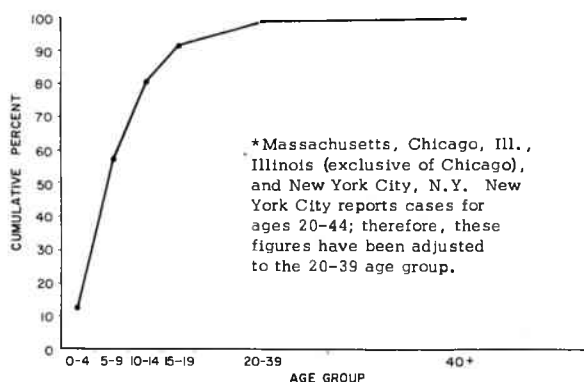
Figure 3
RUBELLA CASE RATES BY FOUR-WEEK PERIODS
EPIDEMIOLOGIC YEARS, 1967-68; 1968-69; 1969-70



case rates calculated for the West South Central region.

The age distribution for reported cases of rubella since 1963 is shown in Table 2. Most reported cases of rubella are from the 5-9 and 10-14 year age groups; approximately 66 percent of all reported cases occurred in these two age groups. The cumulative percent of reported cases by age indicates that 80 percent of the reported cases had occurred by age 14, and 92 percent by age 20 (Figure 4). Significant numbers of cases were reported among young adults, particularly women.

Figure 4
CUMULATIVE PERCENT OF RUBELLA CASES BY AGE
GROUPS FROM SELECTED AREAS* - 1963-1967



*Massachusetts, Chicago, Ill., Illinois (exclusive of Chicago), and New York City, N.Y. New York City reports cases for ages 20-44; therefore, these figures have been adjusted to the 20-39 age group.

(Reported by the Field Services Branch, and the Office of Statistical Services, Epidemiology Program, CDC.)

A copy of the report from which these data were derived is available on request from

Center for Disease Control
Attn: Chief, Field Services Branch,
Epidemiology Program
Atlanta, Georgia 30333

If you are on the mailing list to receive the Rubella Surveillance Report, a copy will be sent to you without an additional request.

Table 2
Reported Cases of Rubella by Age and Sex for Selected Areas - 1963-1967

Age	Total			Male			Female		
	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
0-4	16,373	13.5	13.5	8,218	14.3	14.3	8,155	12.9	12.9
5-9	52,078	43.1	56.6	25,660	44.5	58.8	26,418	41.8	54.7
10-14	28,403	23.5	80.1	13,483	23.4	82.2	14,920	23.6	78.3
15-19	14,527	12.0	92.2	7,446	12.9	95.1	7,081	11.2	89.5
20-39	8,100	6.7	98.9	2,541	4.4	99.5	5,559	8.8	98.3
40+	1,363	1.1	100.0	286	0.5	100.0	1,077	1.7	100.0
Total	120,844			57,634			63,210		

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE
ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

RUBELLA VIRUS VACCINE

INTRODUCTION

Live, attenuated rubella virus vaccine* appears to be a highly effective immunizing agent and the first suitable method of controlling rubella. Through June 1970, more than 19 million doses of vaccine have been distributed in the United States.

Rubella is generally a mild illness, but if the infection is acquired by a woman in the early months of pregnancy, it poses a direct hazard to the fetus. Preventing infection of the fetus is the principal objective of rubella control. This can best be achieved by eliminating the transmission of virus among children, who are the major source of infection for susceptible pregnant women. The live, attenuated rubella virus vaccine is safe and protective for children. Because of an undetermined risk of the vaccine virus for the fetus, the safety for pregnant women is not known.

RUBELLA

Rubella is one of the common childhood exanthems. Most cases occur in school-age children particularly during the winter and spring. By early adulthood, approximately 80 to 90 percent of individuals in the continental United States have serological evidence of immunity.

Rubella is clinically variable, and its common features, such as post-auricular and sub-occipital lymphadenopathy and transient erythematous rash, are often overlooked or misdiagnosed. A mild febrile illness may not be recognizable as rubella, and moreover, inapparent infection often occurs, which further decreases the reliability of clinical history.

Transient polyarthralgia and polyarthritis may accompany or follow the illness. Joint symptoms occur frequently in adult women but are also observed occasionally in adult men and in children.

By far the most important complication of rubella is the frequent occurrence of fetal infection when a woman acquires rubella early in pregnancy, especially in the first trimester. Other complications of rubella such as involvement of the central nervous system or thrombocytopenia are rare.

RUBELLA IMMUNITY

Immunity following rubella appears to be long lasting, even after mild illness or clinically inapparent infection. As with other viral diseases, re-exposure to natural rubella is sometimes accompanied by a booster-type antibody rise without clinical disease, indicative of asymptomatic reinfection. To date, these reinfections have not been shown to be of practical significance.

The only reliable evidence of immunity is a positive serological test. The hemagglutination-inhibition (HI) antibody determination is the test of choice for evaluating im-

munity. However, because of the variation among reagents and technical procedures, results of serological tests should be accepted only from laboratories of recognized competence that regularly perform these tests.

LIVE RUBELLA VIRUS VACCINE

Live rubella virus vaccine is prepared in duck embryo, dog kidney, or rabbit kidney cell cultures. It is administered as a single subcutaneous injection. Differences in the frequency of reactions as well as immunogenicity have been reported with the available rubella vaccine preparations. Approximately 95 percent of susceptible vaccinees develop antibodies. Although titers are lower than those observed following natural rubella infection, vaccination affords protection against clinical illness following natural exposure.

Antibody levels have declined very little during the 4-year period of observation of children who were among the first to be immunized with rubella vaccine. Long-term protection is likely, but its exact duration can be established only by continued observation.

Rubella-like symptoms of rash and lymphadenopathy occur occasionally after vaccination. Complaints related to the joints and distal portions of the extremities have been the most common. Arthralgia and arthritis have been reported in as many as 15 percent of vaccinated children. The small joints are most commonly involved and discomfort is most prominent at night. Less frequently, children may develop pain and paresthesias in the arms and hands or pain in the popliteal fossa with or without joint involvement. These reactions occur more frequently following use of the more immunogenic canine renal cell vaccine. These symptoms begin between 2 and 8 weeks following vaccine administration and may persist for as long as 2 weeks. Though brief recurrences have occurred, no permanent residuae have been reported. It is felt that these symptoms are consistent with manifestations of natural disease.

In susceptible women, reactions of arthralgia and arthritis are much more frequent and more likely to be severe. Not enough susceptible men have been studied to show whether they experience comparable reactions as frequently as women.

Vaccinees may shed relatively small amounts of virus from the pharynx for brief periods between the first and fourth weeks after inoculation. For this reason, transmission of vaccine virus to susceptible contacts is considered theoretically possible. In studies involving deliberate exposure of vaccinees to several thousand susceptible uninoculated persons, only a few contacts developed antibodies. Investigation of the circumstances indicated that most of these seroconversions could be accounted for by the occurrence of natural rubella or experimental error. In a few instances, seroconversion was thought to be compatible with vaccine virus transmission. However, in view of the

*The official name is Rubella Virus Vaccine, Live.

sizable negative experience and the recognized background of unrelated seroconversions, it is difficult to interpret the significance of each individual report of possible vaccine virus spread. Though further documentation is necessary, the probability of such spread is exceedingly low. Thus, the potential hazard to pregnant women is considered to be of such a low order of magnitude that use of vaccine in community programs or in children whose mothers are pregnant is not contraindicated.

Vaccinees exposed to rubella often develop increases in antibody titers without clinical symptoms. These reinfections, which are more frequent in individuals with low antibody titers, occur more commonly in vaccinees than in naturally immune persons. Investigations conducted to date indicate that these reinfections are virologically abbreviated in that viremia has not been detected and virus excretion in the pharynx appears to be significantly diminished in amount and duration. There is no evidence indicating that reinfected vaccinees can transmit virus to susceptible contacts. Likewise, the absence of demonstrable viremia during reinfection suggests that women with vaccine-induced immunity if exposed to rubella during pregnancy would be unlikely to transmit virus to the fetus. However, further study is needed to document the precise clinical and epidemiologic significance of reinfection.

RECOMMENDATIONS FOR VACCINE USE

Live rubella virus vaccine is recommended for boys and girls between the age of 1 year and puberty. Vaccine should not be administered to infants less than 1 year old because of possible interference from persisting maternal rubella antibody.

In the continental United States, children in kindergarten and elementary school deserve priority for vaccination because they are commonly the major source of virus dissemination in the community. A history of rubella illness is not reliable enough to exclude children from immunization.

Vaccination of adolescent or adult males is of lower priority. The vaccine may be useful in preventing or controlling outbreaks of rubella in circumscribed population groups.

Pregnant women should not be given live rubella virus vaccine. It is not known to what extent infection of the fetus with attenuated virus might take place following vaccination, or whether damage to the fetus could result. Therefore, routine immunization of adolescent girls and adult women should not be undertaken because of the danger of inadvertently administering vaccine to pregnant women.

Women of child-bearing age may be considered for vaccination only when the possibility of pregnancy in the following 2 months is essentially nil; each case must be considered individually. This cautious approach to vaccinating postpubertal females is indicated for two reasons: First, because of the theoretical risk involved in vaccination of pregnant women; and second, because significant congenital anomalies occur in approximately 3 percent of all births, and their fortuitous appearance after vaccine had been given during pregnancy could lead to serious misinterpretation.

If vaccination of a woman of child-bearing age is contemplated, the following steps are indicated:

- 1) The woman should be tested for susceptibility to rubella by the HI test (See *Rubella Immunity*).
- 2) If immune, she should be assured that vaccination is not necessary.
- 3) If susceptible, she may be vaccinated only if it is ascertained that she is not pregnant and if she understands that it is imperative for her to avoid becoming pregnant for the following 2 months. (To ensure this, a medically acceptable method for pregnancy prevention should be followed. This precaution also applies to women in the immediate post-partum period.) Additionally, she should be informed of the frequent occurrence of joint involvement (see above).

There is no evidence that live rubella virus vaccine given after exposure will prevent illness. There is, however, no contraindication to vaccinating children already exposed to natural rubella.

There is no contraindication to vaccination of individuals with pre-existing antibody.

Precautions in Using Live Rubella Virus Vaccine

Pregnancy: Live rubella virus vaccine is contraindicated. (See *Recommendations for Vaccine Use*.)

Altered Immune State: Attenuated rubella virus infection might be potentiated by severe underlying diseases, such as leukemia, lymphomas, or generalized malignancy, and when resistance has been lowered by therapy with steroids, alkylating drugs, antimetabolites, or radiation. Such patients should not be given live rubella virus vaccine.

Severe Febrile Illness: Vaccination should be postponed until the patient has recovered.

Hypersensitivity of Vaccine Components: Rubella vaccine should theoretically not be given to children clearly sensitive to the tissue substrates or other components of the vaccine. To date, there have been no documented reports of serious hypersensitivity reactions to rubella vaccine.

Simultaneous Administration of Live Rubella Virus Vaccine and Other Live Virus Vaccines.

Simultaneous administration of live rubella virus vaccine and other live virus vaccines is not recommended as a routine practice until results of controlled clinical investigations are available. Until then, it is recommended that rubella vaccination be separated by at least 1 month from administration of other live virus vaccines.

SURVEILLANCE

Careful surveillance of rubella infection is particularly important with the general use of vaccine. Emphasis should be placed upon improved diagnosis and reporting of rubella, of the congenital rubella syndrome, and of complications of the disease and the vaccine. Competent laboratory investigation of all infants with birth defects suspected of being due to rubella is essential. It will likewise be important to observe patterns of vaccine use and determine its effectiveness.

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
AUGUST 29, 1970 AND AUGUST 23, 1969 (34th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPH- THERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post In- fectious	Serum	Infectious		1970	Cum. 1970
				1970	1969	1970		1970	1969		
UNITED STATES.....	302	3	28	35	26	6	167	1,173	880	62	2,239
NEW ENGLAND.....	10	—	—	3	1	1	12	124	83	2	67
Maine.....	—	—	—	—	—	—	—	29	24	1	6
New Hampshire.....	—	—	—	—	—	—	1	—	6	1	5
Vermont.....	—	—	—	—	—	—	—	8	1	—	5
Massachusetts.....	4	—	—	—	1	—	4	47	31	—	33
Rhode Island.....	6	—	—	3	—	—	4	19	8	—	8
Connecticut.....	—	—	—	—	—	1	3	21	13	—	10
MIDDLE ATLANTIC.....	75	—	—	9	3	—	65	201	144	7	239
New York City.....	63	—	—	1	1	—	38	42	57	—	27
New York, Up-State...	1	—	—	2	—	—	1	37	35	3	69
New Jersey.*.....	10	—	—	1	2	—	13	45	32	2	65
Pennsylvania.....	1	—	—	5	—	—	13	77	20	2	78
EAST NORTH CENTRAL.....	34	—	2	12	12	2	29	170	118	6	126
Ohio.....	15	—	1	9	6	—	4	38	30	1	26
Indiana.....	2	—	—	—	1	—	1	16	9	2	13
Illinois.....	3	—	1	1	—	2	3	26	24	1	35
Michigan.....	14	—	—	2	5	—	21	74	43	2	52
Wisconsin.....	—	—	—	—	—	—	—	16	12	—	—
WEST NORTH CENTRAL.....	4	1	—	—	1	1	3	36	30	15	202
Minnesota.....	4	—	—	—	—	1	1	5	10	—	19
Iowa.....	—	1	—	—	1	—	—	3	8	—	18
Missouri.....	—	—	—	—	—	—	—	20	3	—	19
North Dakota.....	—	—	—	—	—	—	—	—	2	—	2
South Dakota.....	—	—	—	—	—	—	—	—	—	—	2
Nebraska.....	—	—	—	—	—	—	—	—	4	—	3
Kansas.....	—	—	—	—	—	—	2	8	3	15	139
SOUTH ATLANTIC.....	46	2	—	3	2	1	13	168	105	7	417
Delaware.....	—	—	—	—	—	—	1	2	3	—	2
Maryland.....	14	—	—	—	—	—	1	8	11	1	43
Dist. of Columbia...	5	—	—	—	—	—	2	10	1	—	2
Virginia.....	9	2	—	1	2	—	3	67	15	—	55
West Virginia.....	2	—	—	—	—	—	—	2	2	1	7
North Carolina.....	2	—	—	1	—	—	5	22	13	5	169
South Carolina.....	1	—	—	—	—	—	—	3	2	—	34
Georgia.....	—	—	—	—	—	—	—	27	5	—	63
Florida.....	13	—	—	1	—	1	1	27	53	—	42
EAST SOUTH CENTRAL.....	8	—	2	5	3	1	—	49	61	5	160
Kentucky.....	2	—	—	1	—	—	—	16	30	5	132
Tennessee.....	3	—	—	4	2	1	—	26	22	—	—
Alabama.....	1	—	2	—	1	—	—	4	3	—	18
Mississippi.....	2	—	—	—	—	—	—	3	6	—	10
WEST SOUTH CENTRAL.....	23	—	24	1	—	—	11	85	54	5	406
Arkansas.....	—	—	—	1	—	—	—	2	—	—	9
Louisiana.*.....	17	—	—	—	—	—	5	10	10	1	25
Oklahoma.....	2	—	—	—	—	—	—	9	9	—	69
Texas.....	4	—	24	—	—	—	6	64	35	4	303
MOUNTAIN.....	24	—	—	1	1	—	1	55	37	2	187
Montana.....	1	—	—	1	—	—	—	1	4	2	10
Idaho.....	—	—	—	—	1	—	—	2	1	—	3
Wyoming.....	—	—	—	—	—	—	—	3	—	—	—
Colorado.....	—	—	—	—	—	—	1	30	11	—	158
New Mexico.....	—	—	—	—	—	—	—	2	6	—	7
Arizona.....	23	—	—	—	—	—	—	14	13	—	6
Utah.....	—	—	—	—	—	—	—	2	2	—	3
Nevada.....	—	—	—	—	—	—	—	1	—	—	—
PACIFIC.....	78	—	—	1	3	—	33	285	248	13	435
Washington.....	1	—	—	—	—	—	—	15	14	4	43
Oregon.....	—	—	—	—	—	—	1	22	23	—	14
California.....	61	—	—	1	3	—	32	244	206	9	282
Alaska.....	15	—	—	—	—	—	—	1	1	—	1
Hawaii.....	1	—	—	—	—	—	—	3	4	—	95
Puerto Rico.*.....	—	—	—	—	—	—	8	38	20	—	9
Virgin Islands.....	—	—	—	—	—	—	—	—	—	—	—

* Delayed Reports: Aseptic Meningitis: La. Delete 1
Hepatitis, Serum: N.J. Delete 1, P.R. 1
Hepatitis, Infectious: N.J. Delete 3, P.R. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
AUGUST 29, 1970 AND AUGUST 23, 1969 (34th WEEK) — CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
	1970	Cumulative		1970	Cumulative		1970	Cum. 1970	Total 1970	Paralytic	
		1970	1969		1970	1969				1970	Cum. 1970
UNITED STATES.....	186	39,235	20,001	37	1,808	2,300	620	74,476	—	—	18
NEW ENGLAND.....	7	879	1,087	1	79	82	42	8,815	—	—	—
Maine.....	3	204	8	—	3	6	5	673	—	—	—
New Hampshire.....	—	50	238	—	8	2	1	326	—	—	—
Vermont.....	—	8	3	—	7	—	2	585	—	—	—
Massachusetts.....	4	416	212	1	35	33	11	2,781	—	—	—
Rhode Island.....	—	118	23	—	5	10	9	1,472	—	—	—
Connecticut.....	—	83	603	—	21	31	14	2,978	—	—	—
MIDDLE ATLANTIC.....	22	4,798	7,430	12	331	377	50	7,430	—	—	—
New York City.....	5	856	4,876	7	81	73	41	2,702	—	—	—
New York, Up-State...	11	266	593	2	66	68	NN	NN	—	—	—
New Jersey.....	3	1,701	882	—	126	153	3	2,055	—	—	—
Pennsylvania.....	3	1,975	1,079	3	58	83	6	2,673	—	—	—
EAST NORTH CENTRAL.....	35	9,708	2,119	5	202	314	180	19,820	—	—	2
Ohio.....	13	3,795	369	2	80	118	33	3,569	—	—	—
Indiana.....	—	267	466	1	20	35	11	1,769	—	—	—
Illinois.....	7	3,039	485	1	44	44	12	1,721	—	—	—
Michigan.....	9	1,699	240	1	49	95	28	4,905	—	—	1
Wisconsin.....	6	908	559	—	9	22	96	7,856	—	—	1
WEST NORTH CENTRAL.....	25	3,841	515	1	93	118	13	3,712	—	—	1
Minnesota.....	—	38	6	—	13	25	2	346	—	—	—
Iowa.....	24	1,128	329	—	12	16	3	2,273	—	—	—
Missouri.....	1	1,267	22	1	55	51	6	264	—	—	1
North Dakota.....	—	318	12	—	3	1	2	275	—	—	—
South Dakota.....	—	93	3	—	—	1	—	40	—	—	—
Nebraska.....	—	924	136	—	5	9	—	378	—	—	—
Kansas.....	—	73	7	—	5	15	—	136	—	—	—
SOUTH ATLANTIC.....	17	7,127	2,473	6	372	398	90	8,554	—	—	1
Delaware.....	2	260	373	—	3	8	5	295	—	—	—
Maryland.....	—	1,375	74	—	34	36	14	917	—	—	—
Dist. of Columbia....	—	343	—	—	3	8	2	186	—	—	—
Virginia.....	—	1,971	883	1	40	50	20	1,972	—	—	—
West Virginia.....	—	308	191	2	10	18	25	2,079	—	—	1
North Carolina.....	6	856	313	1	76	67	NN	NN	—	—	—
South Carolina.....	8	593	116	—	44	54	10	830	—	—	—
Georgia.....	—	14	1	—	32	70	—	—	—	—	—
Florida.....	1	1,407	522	2	130	87	14	2,275	—	—	—
EAST SOUTH CENTRAL.....	5	1,304	107	1	133	142	32	4,321	—	—	—
Kentucky.....	4	752	63	—	45	50	3	1,567	—	—	—
Tennessee.....	1	373	17	—	58	53	26	2,452	—	—	—
Alabama.....	—	91	4	—	21	24	3	256	—	—	—
Mississippi.....	—	88	23	1	9	15	—	46	—	—	—
WEST SOUTH CENTRAL.....	34	7,485	4,426	7	244	311	63	7,155	—	—	14
Arkansas.....	—	30	16	1	21	29	—	117	—	—	—
Louisiana.....	—	92	120	2	61	80	—	27	—	—	—
Oklahoma.....	1	443	136	—	19	30	—	2,391	—	—	—
Texas.....	33	6,920	4,154	4	143	172	63	4,620	—	—	14
MOUNTAIN.....	20	1,499	834	1	37	43	66	3,397	—	—	—
Montana.....	7	60	16	—	1	8	31	716	—	—	—
Idaho.....	—	35	89	—	6	8	—	87	—	—	—
Wyoming.....	—	11	—	—	1	—	2	34	—	—	—
Colorado.....	—	176	140	—	12	7	9	1,085	—	—	—
New Mexico.....	8	198	242	1	1	6	10	656	—	—	—
Arizona.....	4	965	338	—	14	10	14	695	—	—	—
Utah.....	1	33	8	—	2	2	—	124	—	—	—
Nevada.....	—	21	1	—	—	2	—	—	—	—	—
PACIFIC.....	21	2,594	1,010	3	317	515	84	11,272	—	—	—
Washington.....	—	523	59	—	43	54	11	4,205	—	—	—
Oregon.....	2	228	198	1	25	15	6	978	—	—	—
California.....	19	1,525	708	2	247	425	39	4,624	—	—	—
Alaska.....	—	136	8	—	—	11	1	379	—	—	—
Hawaii.....	—	182	37	—	2	10	27	1,086	—	—	—
Puerto Rico.....	2	879	1,419	1	5	19	19	697	—	—	—
Virgin Islands.....	—	6	40	—	1	—	—	1	—	—	—

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
AUGUST 29, 1970 AND AUGUST 23, 1969 (34th WEEK) — CONTINUED

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970	1970	Cum. 1970
UNITED STATES.....	201	48,786	2	75	3	94	11	183	12	273	53	2,047
NEW ENGLAND.....	20	2,391	—	3	—	1	—	7	—	—	3	71
Maine.....	3	385	—	—	—	—	—	—	—	—	1	25
New Hampshire.....	—	150	—	—	—	—	—	—	—	—	—	1
Vermont.....	—	49	—	—	—	—	—	—	—	—	1	40
Massachusetts.....	13	1,161	—	2	—	1	—	5	—	—	1	2
Rhode Island.....	3	99	—	—	—	—	—	—	—	—	—	1
Connecticut.....	1	547	—	1	—	—	—	2	—	—	—	2
MIDDLE ATLANTIC.....	14	3,906	—	6	1	2	1	42	1	11	5	187
New York City.....	5	574	—	3	—	—	—	11	—	—	—	—
New York, Up-State..	3	409	—	—	—	1	1	16	—	6	5	176
New Jersey.....	5	853	—	2	—	—	—	7	—	2	—	—
Pennsylvania.....	1	2,070	—	1	1	1	—	8	1	3	—	11
EAST NORTH CENTRAL....	46	10,159	—	13	1	18	—	25	—	6	8	169
Ohio.....	3	2,013	—	1	—	2	—	10	—	5	—	44
Indiana.....	19	1,815	—	5	—	12	—	1	—	—	—	14
Illinois.....	2	1,685	—	3	—	2	—	5	—	1	4	55
Michigan.....	12	2,636	—	4	—	—	—	8	—	—	1	17
Wisconsin.....	10	2,010	—	—	1	2	—	1	—	—	3	39
WEST NORTH CENTRAL....	9	3,264	—	4	—	24	—	7	—	2	9	383
Minnesota.....	—	117	—	1	—	—	—	1	—	—	4	75
Iowa.....	5	1,999	—	1	—	—	—	1	—	—	3	69
Missouri.....	1	405	—	1	—	21	—	1	—	2	1	71
North Dakota.....	3	144	—	—	—	1	—	2	—	—	—	26
South Dakota.....	—	1	—	1	—	1	—	—	—	—	—	60
Nebraska.....	—	543	—	—	—	—	—	2	—	—	—	6
Kansas.....	—	55	—	—	—	1	—	—	—	—	1	76
SOUTH ATLANTIC.....	15	6,170	1	19	—	9	5	29	10	187	8	421
Delaware.....	—	41	—	—	—	—	—	—	—	4	—	—
Maryland.....	1	312	—	—	—	—	2	8	—	19	—	1
Dist. of Columbia..	—	19	—	1	—	—	1	1	—	—	—	—
Virginia.....	2	681	—	—	—	1	—	4	6	51	—	176
West Virginia.....	8	1,264	—	—	—	—	—	—	—	5	3	111
North Carolina.....	—	39	—	3	—	4	—	2	3	68	—	1
South Carolina.....	2	630	—	1	—	—	—	—	1	32	—	—
Georgia.....	—	—	—	2	—	3	1	8	—	8	2	74
Florida.....	2	3,184	1	12	—	1	1	6	—	—	3	58
EAST SOUTH CENTRAL....	23	2,577	1	9	1	4	2	14	—	30	3	163
Kentucky.....	4	913	—	1	—	1	—	1	—	3	1	89
Tennessee.....	14	1,316	1	3	1	3	1	8	—	18	2	48
Alabama.....	5	270	—	5	—	—	1	5	—	6	—	25
Mississippi.....	—	78	—	—	—	—	—	—	—	3	—	1
WEST SOUTH CENTRAL....	23	8,638	—	12	—	25	—	14	1	30	11	360
Arkansas.....	—	34	—	3	—	10	—	3	—	5	1	63
Louisiana.....	—	148	—	3	—	4	—	1	—	1	1	54
Oklahoma.....	—	807	—	—	—	8	—	1	—	19	1	72
Texas.....	23	7,649	—	6	—	3	—	9	1	5	8	171
MOUNTAIN.....	10	1,942	—	—	—	5	2	11	—	6	3	62
Montana.....	—	315	—	—	—	—	—	1	—	1	—	1
Idaho.....	—	181	—	—	—	—	—	—	—	2	—	—
Wyoming.....	—	133	—	—	—	—	—	—	—	1	1	3
Colorado.....	4	393	—	—	—	—	1	3	—	2	—	30
New Mexico.....	2	205	—	—	—	—	—	5	—	—	—	9
Arizona.....	3	553	—	—	—	—	1	1	—	—	—	11
Utah.....	1	162	—	—	—	5	—	1	—	—	—	1
Nevada.....	—	—	—	—	—	—	—	—	—	—	2	7
PACIFIC.....	41	9,739	—	9	—	6	1	34	—	1	3	231
Washington.....	4	4,597	—	2	—	2	—	4	—	—	1	8
Oregon.....	12	830	—	3	—	1	1	1	—	—	—	1
California.....	24	4,015	—	4	—	3	—	26	—	1	2	222
Alaska.....	—	94	—	—	—	—	—	2	—	—	—	—
Hawaii.....	1	203	—	—	—	—	—	1	—	—	—	—
Puerto Rico.....	—	26	1	7	—	—	1	4	—	—	—	35
Virgin Islands.....	—	—	—	—	—	—	—	—	—	—	—	—

* Delayed Reports: Typhoid Fever: Okla. 1

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED AUGUST 29, 1970

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
NEW ENGLAND:	673	403	40	35	SOUTH ATLANTIC:	1,238	641	49	64
Boston, Mass.-----	214	117	13	12	Atlanta, Ga.-----	140	67	2	9
Bridgeport, Conn.-----	32	23	5	1	Baltimore, Md.-----	235	113	5	13
Cambridge, Mass.-----	30	19	4	—	Charlotte, N. C.-----	76	29	—	7
Fall River, Mass.-----	32	24	—	—	Jacksonville, Fla.-----	79	42	1	2
Hartford, Conn.-----	58	36	2	3	Miami, Fla.-----	110	64	2	5
Lowell, Mass.-----	19	15	1	—	Norfolk, Va.-----	52	24	5	5
Lynn, Mass.-----	19	11	—	—	Richmond, Va.-----	76	44	10	1
New Bedford, Mass.-----	29	18	2	1	Savannah, Ga.-----	43	22	3	3
New Haven, Conn.-----	67	28	3	10	St. Petersburg, Fla.-----	92	76	6	3
Providence, R. I.-----	51	34	5	1	Tampa, Fla.-----	69	38	5	5
Somerville, Mass.-----	10	9	—	—	Washington, D. C.-----	213	96	8	10
Springfield, Mass.-----	39	26	4	1	Wilmington, Del.-----	53	26	2	1
Waterbury, Conn.-----	27	12	—	2	EAST SOUTH CENTRAL:	635	348	35	22
Worcester, Mass.-----	46	31	1	3	Birmingham, Ala.-----	86	39	2	8
MIDDLE ATLANTIC:	3,249	1,887	112	150	Chattanooga, Tenn.-----	48	32	5	1
Albany, N. Y.-----	54	32	1	4	Knoxville, Tenn.-----	37	18	4	—
Allentown, Pa.-----	29	16	3	1	Louisville, Ky.-----	138	73	15	3
Buffalo, N. Y.-----	144	71	3	14	Memphis, Tenn.-----	156	87	1	—
Camden, N. J.-----	52	28	3	2	Mobile, Ala.-----	32	14	2	5
Elizabeth, N. J.-----	18	11	1	—	Montgomery, Ala.-----	40	26	4	2
Erie, Pa.-----	41	23	4	2	Nashville, Tenn.-----	98	59	2	3
Jersey City, N. J.-----	57	30	6	2	WEST SOUTH CENTRAL:	1,197	597	38	99
Newark, N. J.-----	70	34	—	4	Austin, Tex.-----	39	24	5	1
New York City, N. Y.-----	1,688	987	58	71	Baton Rouge, La.-----	35	15	2	1
Paterson, N. J.-----	37	27	2	1	Corpus Christi, Tex.-----	45	20	—	12
Philadelphia, Pa.-----	498	278	7	28	Dallas, Tex.-----	161	72	1	7
Pittsburgh, Pa.-----	182	102	7	8	El Paso, Tex.-----	51	17	3	11
Reading, Pa.-----	39	27	2	—	Fort Worth, Tex.-----	93	56	8	5
Rochester, N. Y.-----	122	75	4	7	Houston, Tex.-----	220	107	1	18
Schenectady, N. Y.-----	29	23	3	—	Little Rock, Ark.-----	70	38	1	5
Scranton, Pa.-----	32	22	1	—	New Orleans, La.-----	163	69	4	16
Syracuse, N. Y.-----	73	45	—	3	Oklahoma City, Okla.-----	77	40	1	5
Trenton, N. J.-----	30	17	2	2	San Antonio, Tex.-----	122	66	3	11
Utica, N. Y.-----	28	20	5	—	Shreveport, La.-----	49	30	1	2
Yonkers, N. Y.-----	26	19	—	1	Tulsa, Okla.-----	72	43	8	5
EAST NORTH CENTRAL:	2,474	1,343	68	144	MOUNTAIN:	461	261	10	23
Akron, Ohio-----	62	36	—	3	Albuquerque, N. Mex.-----	49	21	2	6
Canton, Ohio-----	31	20	1	1	Colorado Springs, Colo.-----	24	15	1	2
Chicago, Ill.-----	650	328	21	33	Denver, Colo.-----	124	78	3	4
Cincinnati, Ohio-----	171	104	1	6	Ogden, Utah-----	15	9	2	1
Cleveland, Ohio-----	194	92	3	22	Phoenix, Ariz.-----	123	65	2	4
Columbus, Ohio-----	136	66	—	16	Pueblo, Colo.-----	12	7	—	1
Dayton, Ohio-----	84	49	1	3	Salt Lake City, Utah-----	55	27	—	5
Detroit, Mich.-----	335	180	14	12	Tucson, Ariz.-----	59	39	—	—
Evansville, Ind.-----	35	22	2	2	PACIFIC:	1,547	930	23	44
Flint, Mich.-----	57	33	—	5	Berkeley, Calif.-----	25	16	—	—
Fort Wayne, Ind.-----	50	27	4	5	Fresno, Calif.-----	54	24	1	4
Gary, Ind.-----	26	10	1	1	Glendale, Calif.-----	29	23	—	—
Grand Rapids, Mich.-----	34	25	1	2	Honolulu, Hawaii-----	61	31	1	1
Indianapolis, Ind.-----	148	75	2	7	Long Beach, Calif.-----	90	59	1	1
Madison, Wis.-----	59	31	6	8	Los Angeles, Calif.-----	424	260	8	9
Milwaukee, Wis.-----	127	73	2	2	Oakland, Calif.-----	84	47	2	4
Peoria, Ill.-----	40	20	1	4	Pasadena, Calif.-----	31	24	1	1
Rockford, Ill.-----	33	21	1	—	Portland, Oreg.-----	127	71	1	3
South Bend, Ind.-----	45	32	4	1	Sacramento, Calif.-----	62	35	1	2
Toledo, Ohio-----	103	69	2	7	San Diego, Calif.-----	107	63	1	7
Youngstown, Ohio-----	54	30	1	4	San Francisco, Calif.-----	204	128	4	6
WEST NORTH CENTRAL:	797	458	24	45	San Jose, Calif.-----	31	19	—	2
Des Moines, Iowa-----	64	38	4	4	Seattle, Wash.-----	137	73	1	1
Duluth, Minn.-----	35	22	5	1	Spokane, Wash.-----	44	29	—	3
Kansas City, Kans.-----	38	22	—	7	Tacoma, Wash.-----	37	28	1	—
Kansas City, Mo.-----	119	69	3	6	Total	12,271	6,868	399	626
Lincoln, Nebr.-----	28	21	1	—	Expected Number	11,925	6,804	336	490
Minneapolis, Minn.-----	99	56	1	3	Cumulative Total (includes reported corrections for previous weeks)	443,047	252,971	17,712	20,850
Omaha, Nebr.-----	71	39	1	4					
St. Louis, Mo.-----	235	127	5	12					
St. Paul, Minn.-----	75	50	2	2					
Wichita, Kans.-----	33	14	2	6					
Las Vegas, Nev.*	18	8	4	2					

*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

*Delayed report for week ended August 22, 1970

INTERNATIONAL NOTES CHOLERA

During the past week, the World Health Organization (1) reported cholera or changes in regulations concerning cholera for the following countries according to Sections 1, 3 and 4* of its Daily Epidemiological Radiotelegraphic Bulletin: Burma, India, Indonesia, Republic of Korea, Lebanon, Nepal, East Pakistan, the Philippines, Trucial Oman - Dubai, the USSR, and Vietnam were listed under Section 1; Israel and Libya were listed under Section 3; and Guinea in West Africa was listed under Section 4.

According to a recent press report from WHO, Geneva, *Vibrio cholerae* El tor strain has been isolated from persons with diarrheal illness in Guinea by a team of WHO investigators (2). Additional press accounts reported cholera in Iran, Iraq, Jordan, Saudi Arabia, Syria, Tunisia, Turkey, and the United Arab Republic.

(Reported by the Foreign Quarantine Program, CDC.)

References:

1. World Health Organization Weekly Epidemiological Record 45(35), Aug. 28, 1970
2. The New York Times, Sept. 2, 1970

*CLASSIFICATION SYSTEM:

- Section 1 - cases of quarantinable diseases in cities adjacent to a port or airport including the port or airport area unless otherwise indicated.
- Section 3 - (a) cases of quarantinable diseases of particular epidemiological significance in areas which are not port or airport cities; (b) imported or transferred case(s) of a quarantinable disease in a non-infected port or airport city.
- Section 4 - important new information related to the International Sanitary Regulations not included in Sections 1 and 3.

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CENTER FOR DISEASE CONTROL
ATTN: THE EDITOR
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ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE CDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS: THE REPORTING WEEK CONCLUDES AT CLOSE OF BUSINESS ON FRIDAY; COMPILED DATA ON A NATIONAL BASIS ARE OFFICIALLY RELEASED TO THE PUBLIC ON THE SUCCEEDING FRIDAY.

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